STATE OF WASHINGTON

DEPARTMENT OF AGRICULTURE

P.O. Box 42560 • Olympia, Washington 98504-2560 • (360) 902-1800

September 22, 2008

RE: 2008 Fall Lagoon Assessments

Dear Dairy Operator:

For the past five years the Washington State Department of Agriculture's Livestock Nutrient Management Program staff has been routinely inspecting all of the dairies in Washington State. In addition to routine inspections, program staff began evaluating fall lagoon conditions in 2005. Proper lagoon operation and maintenance are important to ensure safe storage capacity going into the winter. Our assessment focuses on how full the lagoons are, any build up of solids and the general condition of the dike.

We initially focused in Whatcom Co. but expanded to other counties across the state in 2006. This year we will continue expanding to other counties and areas. You are receiving this letter because we plan to be in your area during the applicable dates below.

Sept. 24	***Snohomish County***
Sept. 25	***Pierce County***
Sept. 29-Oct.1	***Whatcom County***
Oct. 1-2	***Skagit County***
Oct. 8	***Wahkaikum Counties***
Oct 10	***Clark, and Cowlitz Counties***
Oct. 16	***Spokane and Stevens Counties***
Oct. 17	***Yakima County***
Oct. 23-24	***Grant, Adams, and Franklin***

Due to the number of facilities that we hope to visit and the short time onsite we will **not** be setting up appointments for this assessment. We anticipate the assessment will take only 15 to 30 minutes. We appreciate your cooperation in taking a few minutes to meet with the inspector and participate in the assessment of your lagoon. **Please have your nutrient management plan available for your inspector.** The inspector will document their findings and send a copy to you in the mail.

By doing these assessments now, there should still be time this fall to make proper agronomic applications in order to reduce lagoon levels and to perform any needed maintenance.

We would like to take this opportunity to thank all of the dairy operators for their cooperation and hard work in meeting the goals of the Dairy Nutrient Management Act (Chapter 90.64 RCW).

If you have any questions or concerns please feel free to contact Ginny Prest, Lead Inspector, at (360) 902-1928, e-mail vprest@agr.wa.gov or myself at (360) 902-2894, e-mail nmena@agr.wa.gov.

Sincerely

Nora Mena, Program Manager
Livestock Nutrient Management Program
WA Department of Agriculture

cc: Jay Gordon, WA Dairy Federation
John Larson, WA Association of Conservation Districts
Mark Clark, WA Conservation Commission
Jon Jennings, WA Department of Ecology

WSDA

Livestock Nutrient Management Program
August 2008

Silage Leachate

Another reason to walk your ditches

We are providing this fact sheet to help you understand potential impacts of silage leachate impacts on water quality. Your Nutrient Management Plan includes silage leachate management as required by the Dairy Nutrient Management Act, RCW 90.64.

Silage Leachate in Water is an Environmental and Health Concern

- Leachate contains high concentrations of sugars and nutrients
- Small amounts can deplete oxygen, killing fish and other aquatic organisms.
- Nutrients in surface water can negatively impact recreational use and threaten spawning and rearing habitat for fish.
- Groundwater contaminated by leachate has unpleasant odor. Leachate discharges also result in increased levels of ammonia, nitrates, acidity, and minerals. Wells located nearby a large and poorly managed silage leachate collection system are at high risk for negative impacts.

Watch for Changes on Your Farm

- Your Nutrient Management Plan was developed for your farm by you and your local conservation district, NRCS, or private planner; they can provide technical assistance about implementing your plan.
- NMPs require silage leachate to be contained to storage or directed to a treatment strip.
- Even if your plan has worked in the past, changes in operations or in volume of silage stored can disrupt the leachate handling system, resulting in discharge.

Collection and Containment fails when:

- Leachate's corrosive power widens cracks in the transfer system.
- Construction or settling reroutes leachate away from the collection point.
- Entrance to collection point clogs up or sump quits.
- Leachate enters unprotected tile lines and storm drains.

Photos shown were collected by WSDA inspectors downstream of silage leachate discharges.

Treatment strips fail when:

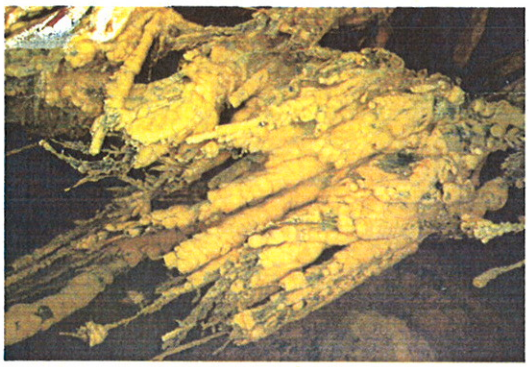
- Leachate increases due to a larger silage stack or wetter than normal silage.
- Amount of rain water or groundwater directed through treatment strip increases.
- Treatment strip silts up and crusts over with feed solids.
- Concentrated leachate kills grass.
- Dairy rotates strip out of grass to plant corn there.

Has your farm had any changes like these?

Find and Fix a Leachate Problem Now, Don't Wait for an Inspector to Find It

To decrease your risk of discharge:

- Know your leachate system and the location of tile lines.
- Plan ahead for changes on the farm.
- Maintain treatment strips and collection points in good condition.
- Inspect treatment strips and collection points frequently for signs of failure.
- Reduce leachate production by cutting and storing silage at low percent moisture.
- Inspect ditches for signs of change such as unfamiliar color, odor, or growth.



You may find signs of a leachate discharge yourself by taking time to look in the ditch

- Look for gray or white algal or fungal mats near possible points of leachate entry to ditches and streams.
- Look for gray or black color to water accompanied by septic smell further downstream where oxygen has been depleted.
- Just look! If it ever changes you will notice.

The Livestock Nutrient Management Program Team developed this fact sheet to provide operators clear, concise guidance. Contacts include Jason Pentzer, Eric Bair, Cara McKinnon, Ginny Prest and Nora Mena, Washington State Department of Agriculture.

For additional information contact your NMP planner or check out: Cropper, J. B. and C. A DuPoldt. 1995. Silage Leachate & Water Quality. Environmental Tech Note N5, NRCS. Available online along with other resources on the subject at: http://wmc.ar.nrcs.usda.gov/partnerships/AWMIT/silage.html.

Lagoon Assessments

Livestock Nutrient Management Program

Full manure lagoons can create a potential to pollute state waters. Full ponds may overflow, create unsafe dike conditions or lead producers to make risky wet weather applications that run off to surface water. High rainfall cannot be controlled but delayed maintenance, poor planning, and mismanagement for what ever reasons, will increase the risk of overfull lagoons and discharges to waters of the state.

History - The lagoon assessment effort began with an intense focus on Whatcom County in 2005. Since then, the number of assessments each fall has increased and the effort has broadened to include facilities in all parts of the state.

LNMP inspectors encourage producers to maximize storage capacity going into winter and alert them to potential problems at a time when pre-winter solutions are still possible. Inspectors use a simple lagoon assessment tool to diagnose potential risks during brief site visits. The tool helps inspectors grade each facility's lagoon for: 1) manure solids management, 2) dike condition, and 3) storage level.

2007 Assessment - Each inspector created a list of facilities in their area to visit. Last year, just under half of the selected facilities were targeted based on a history of concerns about lagoon maintenance and management, adequacy of storage, or early applications. The rest were included based on neutral criteria such as their location or the time elapsed since their last inspection.

Results - The inspectors assessed a total of 164 lagoons at 84 facilities throughout the state. At the time of the assessments, additional pump down was needed at 35% of the lagoons, 21% had dike conditions needing some type of attention and 15% had heavy solids build up. Targeted sites had higher percentages of the three conditions than the randomly selected sites. Inspectors returned to six facilities later in the fall to document that necessary follow-up work had been completed.

Late corn harvests, early fall rains and late spring rains resulted in field application constraints affecting many operators. This created challenges to ensure good lagoon management as well as to maintain agronomic field applications. There were a number of lagoons that were very full coming out of the wet season. There were some field applications made late in the fall and early in the spring, some of which may have been directly related to lagoon levels.

2008 - This year's assessment will be undertaken during the end of September and early October. Facilities in targeted areas are notified of the planned date or dates for their area. Inspectors may not make it to all facilities that are notified.